

I claim

1. A system for sensing, storing and updating operational parameters, visual conditions and audible conditions associated with an automotive vehicle, comprising:

- (i) a plurality of sensors for registering automotive vehicle operational parameters, including at least one vehicle-mounted digital video/audio camera which is placed inside the rear view mirror;
- (ii) microprocessor control means responsive to said vehicle operational parameters which have been registered by said plurality of sensors for processing said operational parameters and video images and audio signals from said digital video/audio camera;
- (iii) rewritable non-volatile memory means for storing processed operational parameters, visual images and audio signals which are provided by said microprocessor control means; and
- (iv) said microprocessor control means updating the rewritable memory as new parameters, visual images and audio signals are sensed.

2. The system as claimed in claim 1, wherein one signal video/audio camera is provided for viewing forwardly and is placed in the rear view mirror to provide a visual image and audio sounds of an oncoming forward path of travel of said automotive vehicle.

3. The system as claimed in claim 1 wherein a video/audio camera is provided for viewing rearwardly to provide a visual image and audio sounds of a previous rearward path of travel of said automotive vehicle.

4. The system as claimed in claim 1 including a video and audio camera is provided for viewing each side of said automotive vehicle.

5. The system as claimed in claim 1, wherein said microprocessor control means and said rewritable non-volatile memory means are housed on a tamper-proof, but removable, box which is fixed to said automotive vehicle.

6. The system as claimed in claim 1, wherein said microprocessor control means continuously updates said rewritable non-volatile memory means.

7. The system as claimed in claim 1, wherein said control means periodically and regularly updates said rewritable non-volatile memory means.

8. The system as claimed in claim 1, wherein said rewritable non-volatile memory means includes multiple logical data pages for storing independent sets of data.

9. The system as claimed in claim 1, wherein said rewritable, non-volatile memory means includes one of: a dynamic RAM with a battery backup and a refresh memory, a static RAM with a battery backup, and an electrically-alterable ROM.

10. The system as claimed in claim 1, wherein said operational parameters of said automotive vehicle are related to events which are internal to said automotive vehicle, and which are selected from at least one of: braking pressure; brake temperature; brake line hydraulic pressure; average speed; acceleration or deceleration in one or more dimensions; rate of turning; steering angle; compass direction of travel; impact; tire pressure; cruise control status; windshield wiper status; fog light status; defroster status; and geographic positioning information.

11. The system as claimed in claim 1, wherein said digitized video images and audio signals are related to events which are external to said automotive vehicle and which are selected from at least one of: the closing rate between said automotive vehicle and an obstacle and/or another automotive vehicle, the distance between said automotive

vehicle and an obstacle and/or another automotive vehicle, and the direction of an obstacle and/or another automotive vehicle.

12. The system as claimed in claim 1, wherein the storing of the processed operational parameters, and of said video images and audio signals is commenced upon turning "on" the ignition of the automotive vehicle.

13. The system as claimed in claim 1, wherein the storing of the processed operational parameters, and of said video images and audio signals is terminated upon turning "off" the ignition of the automotive vehicle.

14. The system as claimed in claim 1, wherein the storing of the processed operational parameters is terminated upon turning "off" the ignition, and the storing of the said video images and said audio signals is terminated automatically.

15. The system as claimed in claim 1, including

- (v) a computer interface for coupling to said rewritable non-volatile memory means and to an external computer which is loaded with an appropriate computer program, said computer interface providing means for storing said vehicular operational data and said digitized video image signals and said audio signals in a computer-readable form; and
- (vi) analyzing means which are operate upon executing a computer program which has been loaded into said computer for accessing said operational data, said video images and said audio signals, and for enabling said computer to analyze said operational data values, said digitized video images and said audio signals for reconstructing an accident involving said automotive vehicle.

16. A method for recording events relating to an accident involving an automotive vehicle, said method comprising the steps of:

(a) providing a plurality of sensors for registering vehicular operational parameters, including at least one vehicle-mounted digital video/audio camera;

(b) providing a microprocessor control means which is responsive to said vehicle operational parameters which have been registered by said plurality of sensors for processing said operational parameters, said digitized video images and said audio signals from said digital video/audio camera;

(c) providing rewritable non-volatile memory means for storing processed operational parameters, video images and audio signals which are provided by said microprocessor control means;

(d) providing receiving and transmitting interface means for receiving vehicular operational data, and for receiving digitized video images and audio signals, and for transmitting said vehicular operational data, and for transmitting said digitized video images and said audio signals to said rewritable non-volatile memory means;

(e) providing a computer interface adapter for coupling to said rewritable non-volatile memory means;

(f) providing said computer interface adapter with computer interface means for enabling the storing of said vehicular operational data and said digitized video images and said audio signals in a computer-readable form;

(g) coupling said computer interface adapter to a computer which is loaded with an appropriate computer program;

(h) reading, into said computer, said computer-readable automotive vehicle operational data, said video images and said audio signals; and

(i) executing said computer program for reconstructing an accident involving said automotive vehicle.

17. The method as claimed in claim 16, wherein said reconstructed accident is displayed on a monitor of said computer, and/or is printed frame-by-frame, and/or is converted to video/audio tape for viewing via a VCR.

18. The method as claimed in claim 16, wherein said computer program is password protected.

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